

FIG 1

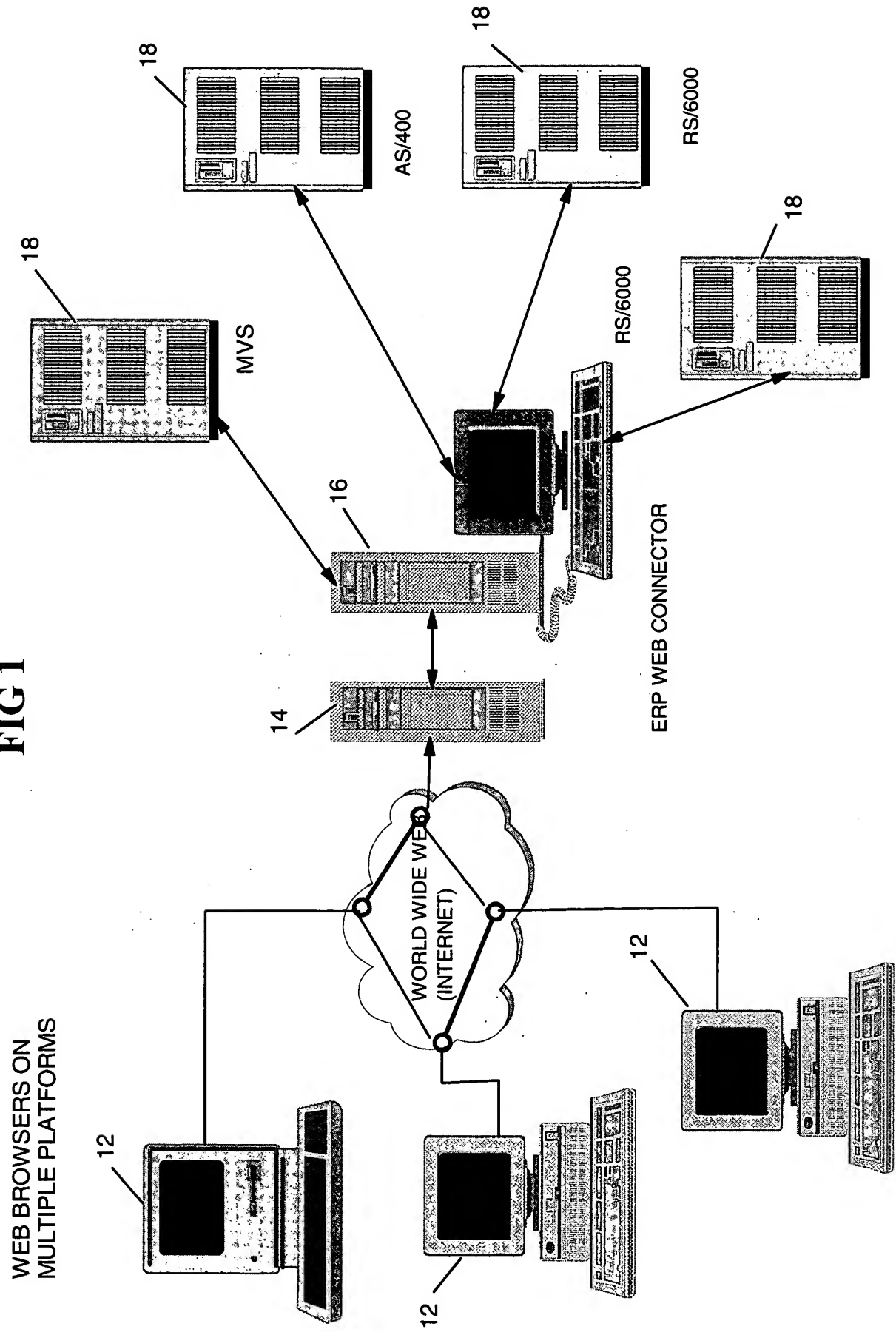


FIG. 2

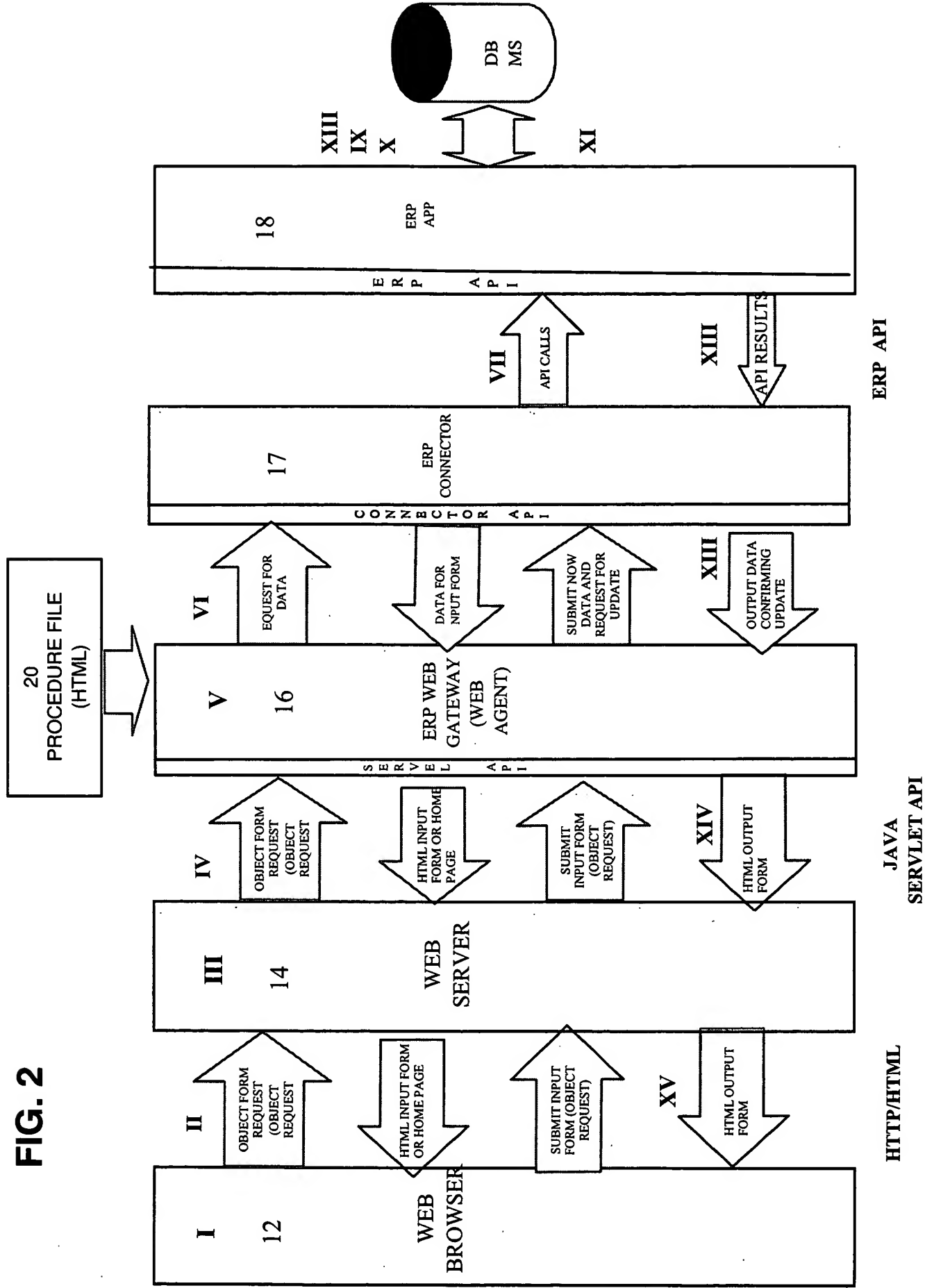


FIG. 3a

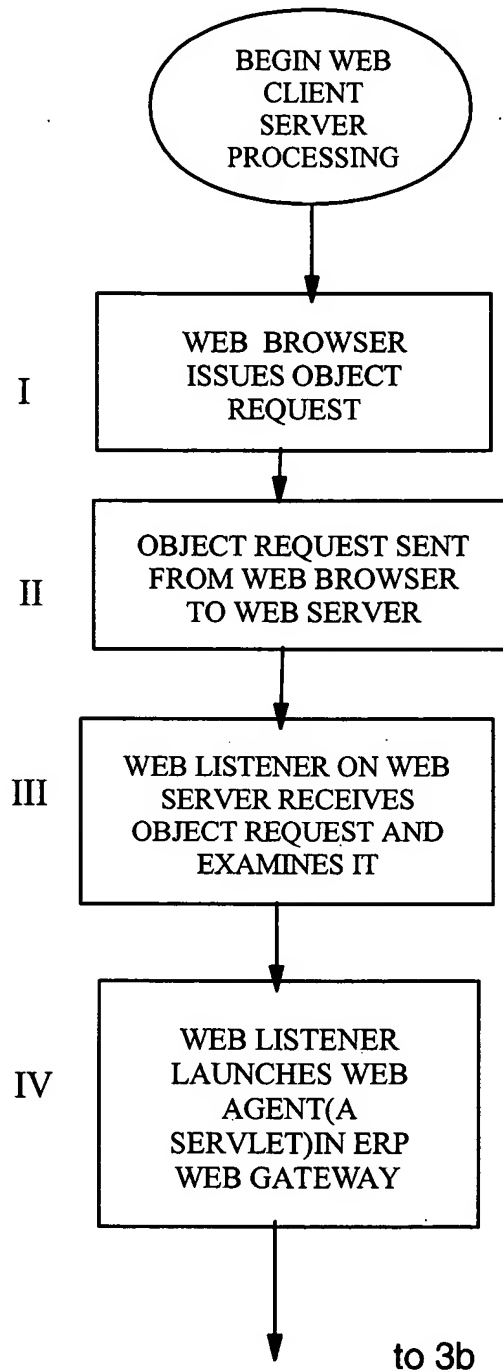


FIG. 3b

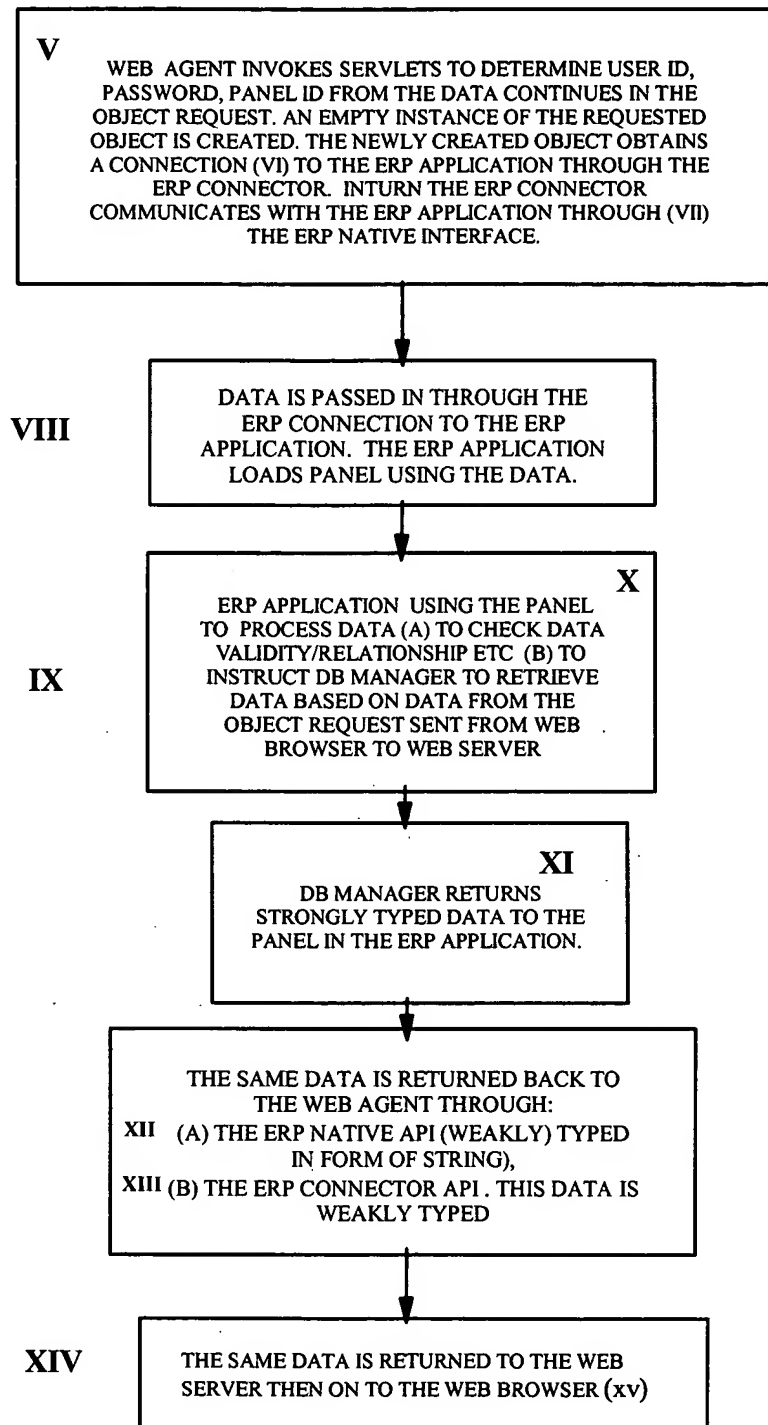


FIG. 5

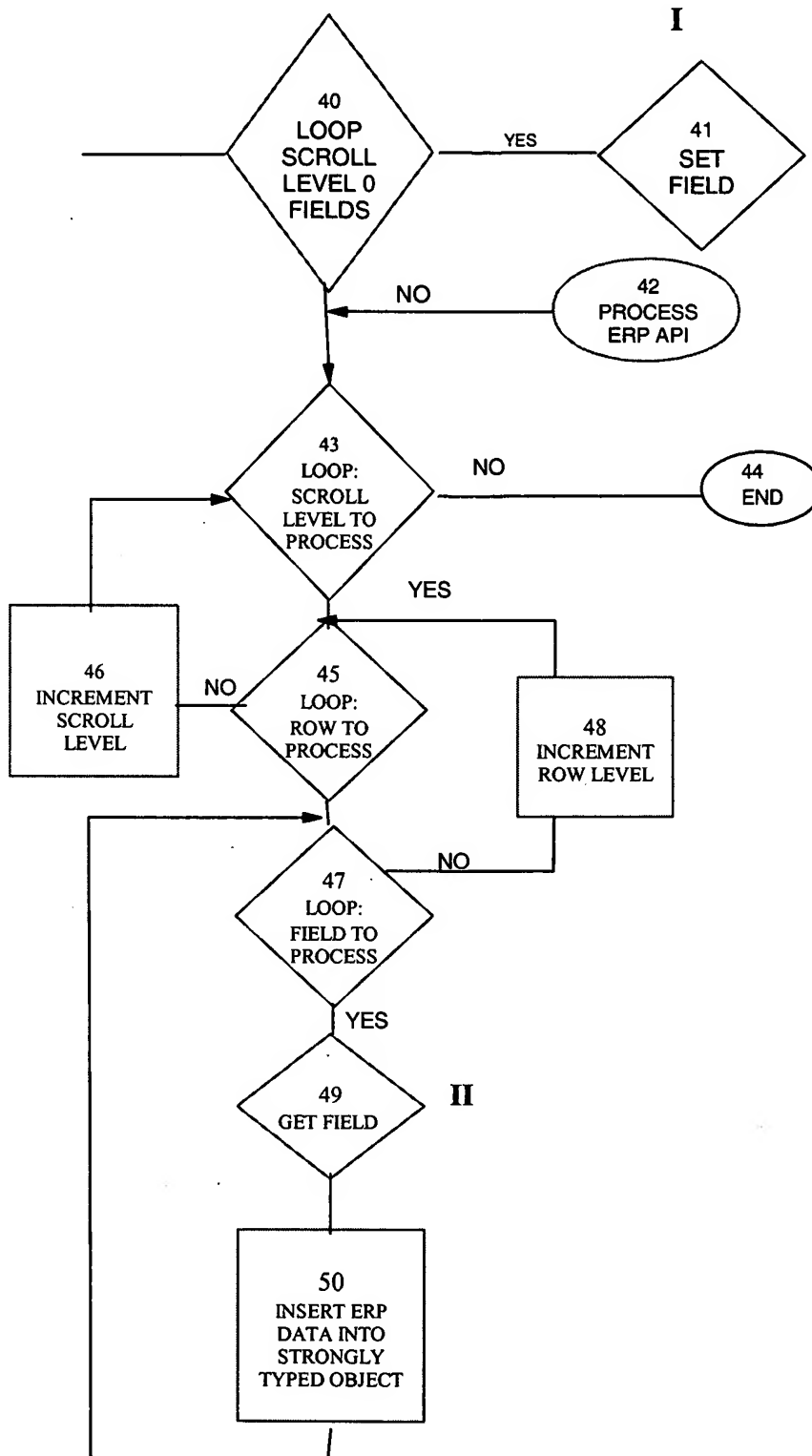


FIG. 6

STUDENT COURSE LIST

51
FIELD

JOHN SMITH

52
SCROLL LEVEL 1

	55 FIELD 1	56 FIELD 2
53 ROW 1	57 MATH	100
54 ROW 2	58 ENGLISH	101

WEEKLY TYPED

FIG. 7

STUDENT COURSE LIST

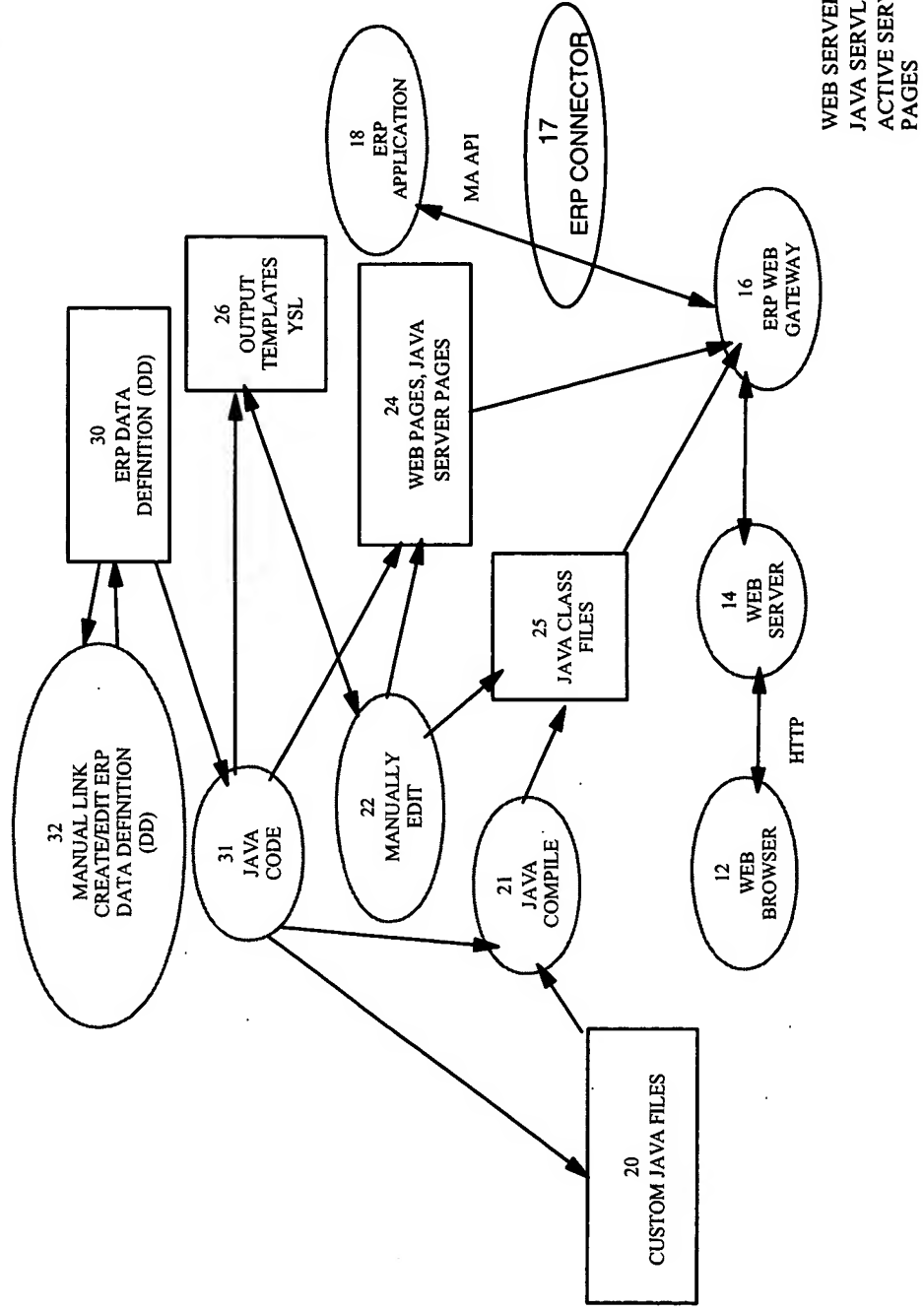
70

59 STUDENT NAME	<div>JOHN SMITH</div>	
60 COURSE LIST		
COURSE 1 61		
NAME 62	<div>MATH</div>	
NUMBER 63	<div>100</div>	
COURSE 2 64		
NAME 65	<div>ENGLISH</div>	
NUMBER 66	<div>101</div>	

STRONGLY TYPED

FIG. 8

DEVELOPMENT
ENVIRONMENT



WEB SERVER API,
JAVA SERVLET API,
ACTIVE SERVER
PAGES

FIG. 9
DEFINING A SUB-GRAPH OF DATA OBJECTS

